

## **AIRCRAFT WITH ACTIVE CENTER OF GRAVITY CONTROL**

Howard Lee  
John M. Morgenstern  
Hossein Aminpour

### **ABSTRACT**

A supersonic aircraft comprises a wing, a fuselage, a plurality of fuel tanks contained within the wing and/or fuselage, and a fuel transfer system communicatively coupled to the plurality of fuel tanks and capable of transferring fuel among the plurality of fuel tanks. The aircraft further comprises at least one sensor capable of indicating a flight parameter and a controller. The controller is coupled to the one or more sensors and to the fuel transfer system. The controller can transfer fuel among the plurality of fuel tanks and adjust the aircraft center of gravity to reduce trim drag and increase aircraft range.